BLABLA, J.; JOHN, J.; JELINKOVA, A.; VENDL, J.

On some conditions for the use of lasers in photocoagulation of the retina. Cesk. oftal. 21 no.4:281-291 Jl '65.

1. Oftalmologicka katedra Ustavu detskeho lekarstvi v Praze (vedouci doc. dr. F.V. Michal) a Ustav radiotechniky a elektroniky Ceskoslovenskej akademii ved v Praze (reditel inz. V. Zima, CSc.).

HORNIK, Tomas, inz. (Praha); VENDL, Jaromir (Praha)

Experience in electroosmotic drying of moist brickwork.
Elektrotechnik 19 no.5:131-134 My '64.

KLIMENT, J.; VEIDL, L.

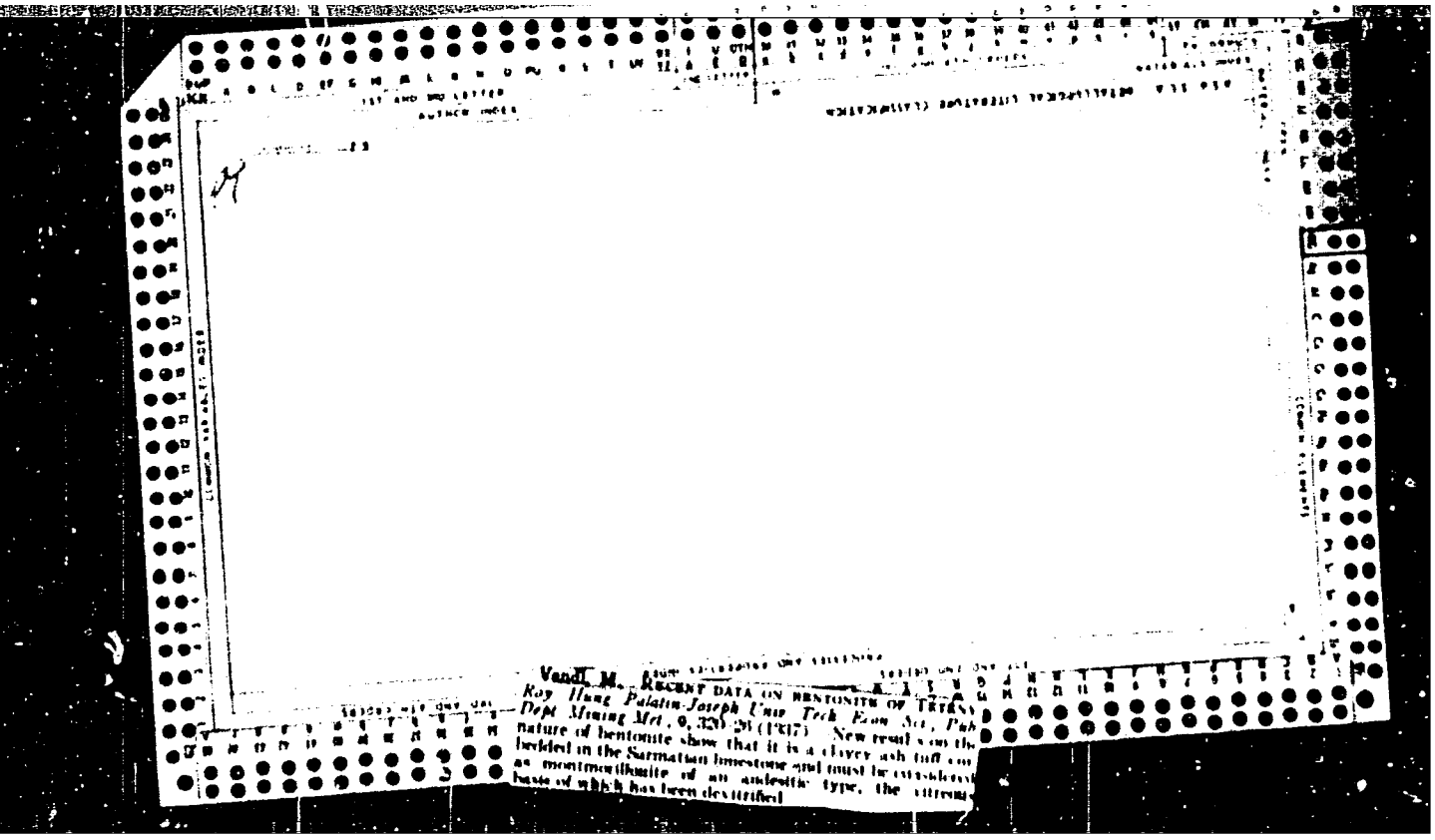
Lipodystrophy with muscular hypertrophy. Cesk. pediat. 19 no.5:425-430 My'64

1. Detske oddeleni nemocnice v Teplicich; vedouci: lekar MUDr. K.Weigl.

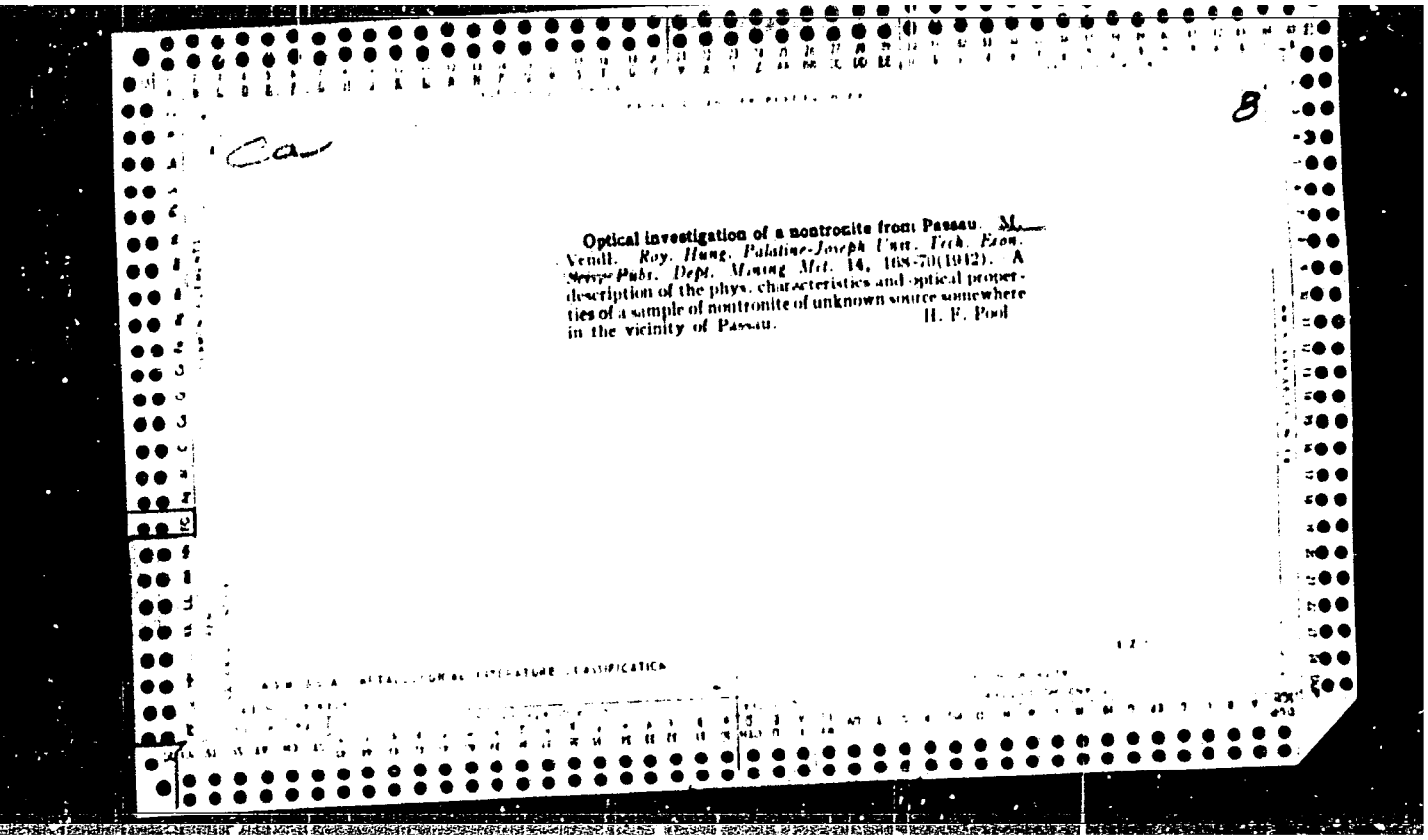
VENDL,L.

Our experiences with hospital outpatient services for children with diseases of the kidney and urinary tract. Cesk. pediat. 20 no.2:169-178 F '65

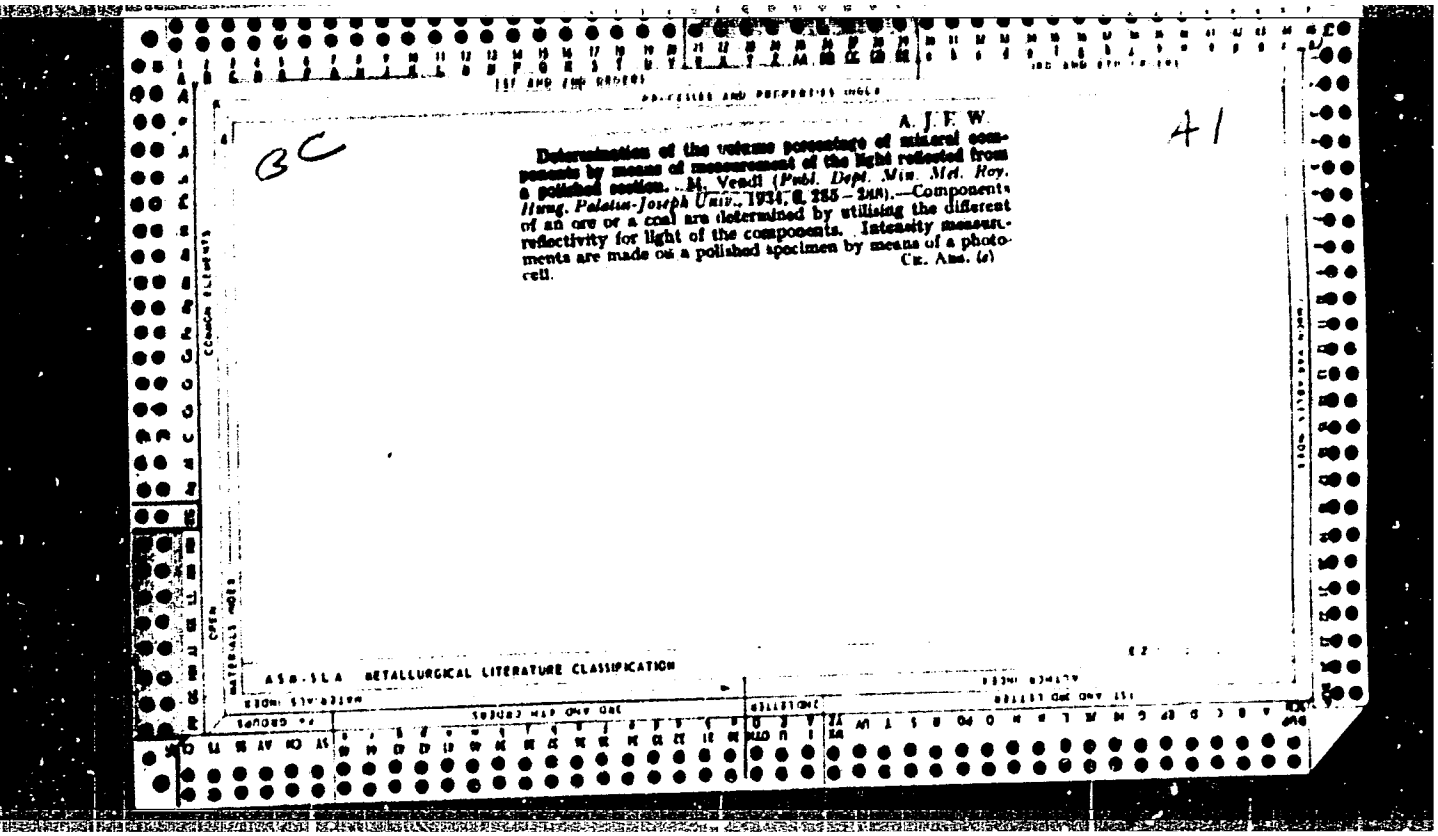
1. Detske oddeleni nemocnice v Teplicich (vedouci: MUDr. K.Weigl)



Vendl M. RECENT DATA ON BENTONITE OF TEXAS
Roy Hung Palatin-Joseph Univ Tech Econ Sci, Pub
Dept Mining Met, 0, 329-39 (1967). New result on the
nature of bentonite show that it is a clayey ash tuff
bedded in the Sarmatian limestone and must be considered
as montmorillonite of an andesitic type, the
basis of which has been devitrified



Optical investigation of a nontronite from Passau. M. Vendl. *Roy. Hung. Palatine-Joseph Univ. Tech. Econ. Service Publ. Dept. Mining Met.* 14, 168-70(1942). A description of the phys. characteristics and optical properties of a sample of nontronite of unknown source somewhere in the vicinity of Passau. H. F. Pool

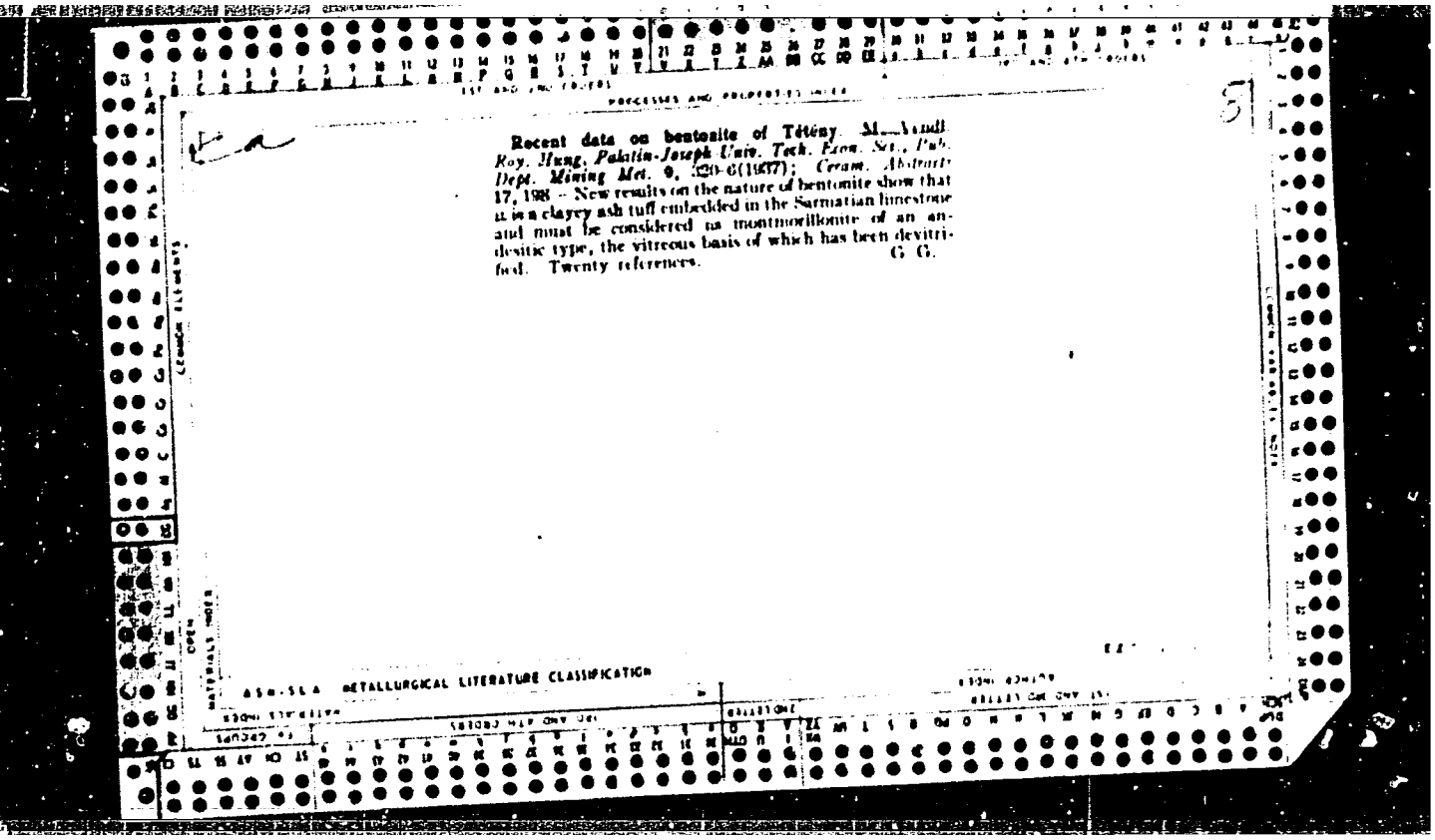


A. J. F. W.

Determination of the volume percentage of mineral components by means of measurement of the light reflected from a polished section. M. Veaël (*Publ. Dept. Min. Met. Roy. Hung. Palatin-Joseph Univ.*, 1934, **8**, 255–268).—Components of an ore or a coal are determined by utilising the different reflectivity for light of the components. Intensity measurements are made on a polished specimen by means of a photocell. (Chem. Abs. (c))

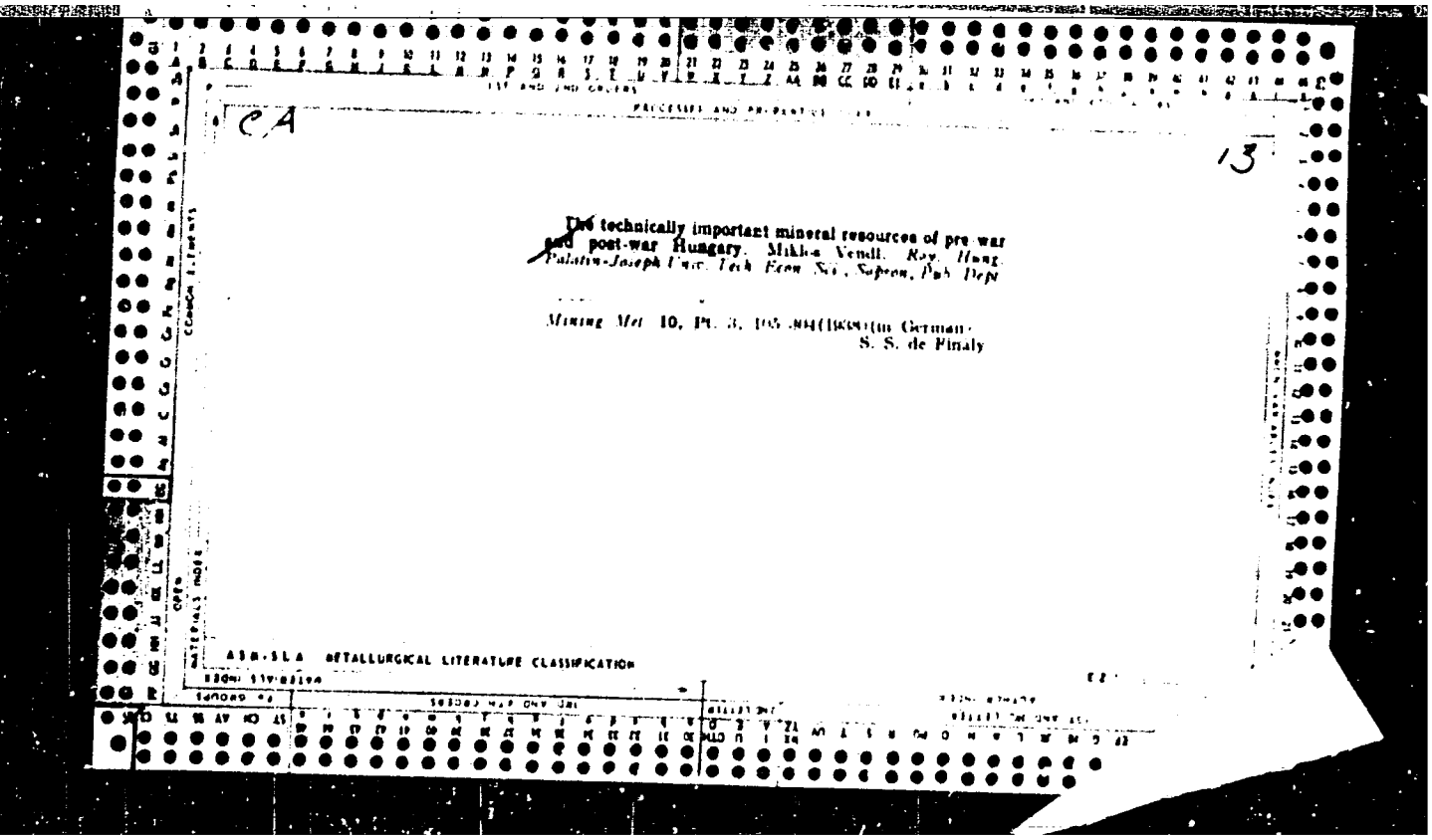
R

Vendl, M. Bentonite from the [illegible] limestones of [illegible]. *Földtani Közlöny*, **68**, [illegible]; *Math. naturw. Anz. ungar. Akad. Wiss.*, **58**, [illegible]. Bentonite deposits and their geology are discussed. The principal constituent is montmorillonite, with admixtures of quartz, sanidine, oligoclase, zircon, limonite, ilmenite, calcite, and muscovite.



Recent data on bentonite of Tétény. M. Vendl. *Roy. Hung. Palatin-Joseph Univ. Tech. Econ. Sci., Pub. Dept. Mining Met.* 9, 220-6(1937); *Ceram. Abstracts* 17, 198 – New results on the nature of bentonite show that it is a clayey ash tuff embedded in the Sarmatian limestone and must be considered as montmorillonite of an andesitic type, the vitreous basis of which has been devitrified. Twenty references. G. G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ch

The existence of a stable isotope of element 84. J. Proszt and Miklós Vanic. *Soproni M. K. Bány. Erd. Föiskola Bány. és Koh. Oszt. Koezleményei* 1930, 313-31. Two kg. of crude Te, and 2.5 kg. of Bi residues were worked up and purified several times in search for the stable isotope of element 84. Preparations were examd. by Hevesy and Guenther (C. A. 24, 3700) and G. Ortner. The results were neg. in both cases. The occurrence of a stable isotope of element 84 (Po) is very improbable in the lithosphere.

S. S. de Finaly

3

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. VENDLAND, K. N.

2. USSR (600)

4. Iron Ores--Pap District

7. Geology and ore reserves of the Pap District in the Uzbek S. S. R. (Chadak and Charkasar). Izv. Glav. upr. geol. fon. no. 2 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

1. VENDLAND, K. N.

2. USSR (600)

4. Pap District - Iron Ores

7. Geology and ore reserves of the Pap District in the Uzbek S. S. R. (Chadak and Charkasar). (Abstract.) Izv. Glav. upr. geol. fon., no. 2, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

VENDLER, K.

High mechanization in our workshops. p. 14.
(ZELEZNICAR. Vol. 6, no. 1, Jan. 1956, Praha, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957. Uncl.

VENDLER, K.

How may we assure the initiative of our locomotive engineers in their campaign to haul heavy tonnages? p.9. (Zeleznice, Praha, Vol. 4, no. 1, Jan. 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

VENDLER, K.

New technology in our workshops. p. 317

ZELEZNICAR. (Ministerstvo dopravy) Praha, Czechoslovakia
Vol. 2, no. 6, 1959.

Monthly List of East European Accession (EEAI), LC Vol. 9, no. 2
Feb. 1960.

Uncl.

VENDLER, K.

It is necessary to eliminate sections with reduced speed or interruptions on our railroads; with pledges in honor of the 10th Congress of the Communist Party of Czechoslovakia to stengthen socialist transportation. p. 80.
ZELEZNICE, Prague, Vol. 4, no. 4, Apr. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

VENDLER, K.

Following the example of railroad men at Ostrava, p. 310, ZELEZNICE (Ministerstvo dopravy) Praha, Vol. 4, No. 12, Dec. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

VENDLER, K.

The Cherepanovs, constructers of the first Russian locomotive; an exerpt from a book. Tr. from the Russian, p. 324, ZELEZNICE (Ministerstvo dopravy) Praha, Vol. 4, No. 12, Dec. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

VENDLER, K.

Schools for members of the Railroad Armed Guard and Fire Protection Service, p. 322, ZELEZNICE (Ministerstvo dopravy) Praha, Vol. 4, No. 12, Dec. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

VENDLER, K.

Locomotive engineers for heavy tonnages should be helped in every possible way. p. 206.
ZELEZNICE, Prague, Vol. 4, no. 8, Aug. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

VENDLER, K.

Production groups and technical knowledge; aid to fulfillment of the work plan. p. 146. Against uneconomical handling of railroad cars. p. 148. Oh, that our administration...; a feuilleton. Tr. from the Russian. p. 148.
ZELEZNICE. Vol. 4, no. 6, June 1954. Prague.

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 5, No. 6, June 1956 Uncl.

VENDLER, K.

Three thousand tons from Cierna nad Tisou to Michalany. p. 196.
It is necessary to develop speedy driving of heavily loaded trains in every possible way. Tr. from the Russian. p. 197.
ZELEZNICE, Prague, Vol. 4, no. 8, Aug. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

VENDLER, K.

Fighting inadequacies of Czechoslovak railroads. p. 165.
Correspondence between Soviet and Czechoslovak railroad men at Ialangach and Albrechtice. p. 167.
ZELEZNICE, Prague, Vol. 4, no. 7, July, 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

VENDLER, K.

Further success in railroad bridge construction. p. 292.
ZELEZNICE, Prague, Vol. 4, no. 11, Nov. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

VENDLER, K.

Outstanding results of the Railroad Technology Week at Pizen. p. 61. (Zeleznice, Praha, Vol. 4, no. 3, Mar. 1954)

SO: Monthly list of East European Accessions (EEAL, LC Vol 4, No. 6, June 1955, Uncl

VENDLER, K.

"Values and Deficiencies in the Cooperation between Railroad Men and the Customers." p. 222 (Zeleznice, Vol. 3, no. 9, 1953, Praha)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol. 3, No. 3 Library of Congress, March 1954 ~~1953~~, Uncl.

VENDIER, K.

"Forward with our Own Measuring Train to More Safety in Transportation." p. 233
"It Is Necessary to Mechanize the Maintenance of Roadbeds." p. 235
"Railroad Men, Fulfill the Tasks of Increased Transportation in Autumn!" p. 236
(Zeleznice, Vol. 3, no. 10, 1953, Praha)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol. 3, No. 3 Library of Congress, March 1954, Uncl.

VENDLER, K,

"German railroad employees won the "Friendship in Peace" contest.p.120
-is-.The work of the railroad employees in the Brno Main Station.p.121
A thirty-year struggle for the contruction of a spark arrester. p.122"
ZELEZNICE, Vol.3, No.6, Feb. 1953. Czechoslovakia.

SO: Monthly List of East European Accessions, L.C. Vol.2, No.11, Nov. 1953
Uncl.

VENDLER, K.

"Jan Chodora as an Improver and Builder of Socialism" p. 47
"A Stakhanovite School for Shunters." p. 47
"Instructional Films for the Education of Railroad Employees." p. 47 (Zeleznice, Vol. 3, no. 2, 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress, Feb. 1954, Uncl.

VENDLER, K.

"Rare guests V.G. Blazhenov and P.D. Sudnikov paid us a visit." (p. 279).
ZELEZNICE (Zeleznicni vydavaterstvi) Praha, Vol 3, No 11, 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

VENDLER, K.

"We should take more care of innovators and inventors." (p. 262). ZELEZNICE (Zeleznicni vydavatelstvi) Praha, Vol 3, No 11, 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

VENDLER, K.

Physical education serving the defense of our country. p. 71
(ZELEZNICE,. Vol. 3, no. 3, Jan. 1951, Czechoslovakia)

SO: Monthly List of East European Accession, Vol. 2, #8, Library of Congress
August 1953, Uncl.

VENDLER, V.

Railroad construction in socialism. p. 176.
ZELEZNICE, Vol. 4, no. 7, July 1954, Prague.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

Z/017/62/051/005/001/002
D291/D303

9.4340

AUTHORS: Vendlerová, Věra, and Spiess, Petr, Engineers

TITLE: Surface protection of semiconductor elements and its influence on electric parameters

PERIODICAL: Elektrotechnický obzor, v. 51, no. 5, 1962, 232-233

TEXT: The use of polyethylene and polypropylene for surface protection to increase the electric stability of germanium and silicon power diodes is briefly described. As a result of several surface-protection tests, the following method has been established: The diodes are etched by the conventional method, rinsed, and dried at 100°C. Subsequently, a plastic-material annulus is applied to the diode with slight pressure at elevated temperature, so that it covers the edges of the p-n junction and the bare semiconductor material. For germanium power diodes, the protective annulus is stamped from 1 mm thick high-pressure polyethylene which has a melting point of 101 - 115°C and a dielectric constant of 2.4; for silicon power diodes, the annulus is stamped from 0.8 mm thick polypropyle-

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ne which has a melting point of 160 - 170°C. The influence of this surface-protection method has been investigated by measuring the inverse characteristics of 200 power diodes prior to and after applying the protective annulus. It was found that the inverse current decreased considerably in protected germanium diodes, that, after an initial rise, the inverse current also decreased in protected silicon diodes, and that the bends in characteristic curves occur at higher voltages.(Technical Editor: Engineer Sl. Košler). There are 3 figures, and 5 references. The references to the English-language publications read as follows: G.A. Barnes, Electrical properties of clean germanium surfaces. J. Phys. and Chem. Solids, 1959, 8, 111-113; Harten, Surface Recombination of Silicon, Phillips Res. Repts., 1959, 15, no. 4, 346-360.

ASSOCIATION: ČKD Praha, n. p., závod elektrotechnika, laboratoř plovodičů (ČKD Prague, National Enterprise, Electrochemical Works, Semiconductor Laboratory)

SUBMITTED: September 27, 1961

84115

9.4300 (1035, 1138, 1143)

Z/017/60/049/011/008/013
E073/E535

AUTHORS: Píša, Gustav, Engineer, Spiess, Petr, Engineer, Sebek, Svatopluk, Engineer, Vendlerová, Věra, Engineer and Vinopal, Jaromír, Engineer Doctor

TITLE: New Knowledge Gained in the Development of the Technology of Germanium and Silicon Rectifier Elements

PERIODICAL: Elektrotechnický obzor, 1960, Vol.49, No.11, pp.579-583

TEXT: In addition to reviewing world trends in semiconductor development, the authors deal briefly with results of development work in the Semiconductor Laboratories of ČKD, Prague. The problem of dislocations in germanium has been dealt with extensively in Czech as well as in foreign literature (Refs. 3,4,5). Therefore, the authors deal only briefly with the results of extensive experiments, the aim of which was to determine the influence of the absolute number of dislocations on the quality of the P-N junctions and the influence of accumulation of dislocations and of microscopically visible disturbances caused by accumulation of dislocations within a small volume. A more detailed treatment of these is given in a paper by Bürger and

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New Knowledge Gained in the Development of the Technology of Germanium and Silicon Rectifier Elements

Šebek which is in the process of publication. In the experiments three germanium single crystals have been used which have a satisfactory specific resistance and a lifetime of the minority carriers. All these three crystals contained in some spots very pronounced grouping of dislocations in the form of lines and stripes. All the cut plates were etched in order to make the dislocations visible. The locations of the disturbances were marked in detail. In order to be able to make a good comparison test discs of 12 mm diameter were cut from these specimens. These could be sub-divided into three groups:
a) Plates from locations which did not contain accumulations of dislocations but only uniformly distributed dislocations;
b) Plates from locations that contained slight accumulations of dislocations in the nature of stripes;
c) Plates from locations that contained considerable line dislocations formed by a large quantity of dislocations. A total of about 150 such plates were investigated which originated

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from three germanium crystals. The characteristics of the three types of discs are reproduced in Fig.1 and it can be seen that the diode of the group (c) reaches only about 40% of the voltage of the diodes of group (a). All the results obtained for the three groups of diodes were used for plotting average value curves. These are similar to the curves in Fig.2. The characteristics of diodes from group (b) were below those of group (a) and on the average were nearer to those of group (c). The experiments have shown the quality of the P-N transitions is decisively influenced by the poorest transition spot, i.e. by the spot that contains a high accumulation of dislocations and it is this spot which determines the properties of the P-N junction. In studying the inverse voltages of diodes, investigations were made on materials with various average numbers of dislocations between zero and several tens of thousands per cm^2. As a result, the dependence was determined of the inverse voltage of junction rectifiers on the number of

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dislocations, provided that the dislocations are uniformly distributed, without considerable accumulations of stripes or lines. It was found that within wide limits this dependence is not greatly affected by the absolute number of dislocations, provided that these are uniformly distributed. Only in the case of high densities, i.e. above $2 \times 10^4/cm^2$, will there be a considerable drop of the average voltage of the diodes. The P-N transitions of germanium were first etched electrolytically by means of a hydrofluoric acid and then were etched again with a mixture, the main component of which was hydrogen peroxide with additions of nitric, acetic and hydrofluoric acid. The effect of this new etching mixture was tested on a large number of diodes. The inverse voltage improved considerably, on the average by 100 V, as also did the inverse current (Table 1 and Fig.2). However, the surface of the diode is much more sensitive to the atmosphere and it was necessary to develop a new method of protecting the junctions. For this purpose silicon

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varnishes and silicon vaseline were used but these did not prove satisfactory. Subsequently, polymer type synthetic materials were used for this purpose and the characteristics of a diode after etching with hydrofluoric acid, the above mentioned etching mixture and protection by embedding in a synthetic material, are plotted in Fig.3. For the manufacture of silicon P-N junctions with inverse voltages exceeding 1000 V it is advisable to use silicon with a specific resistance of 100 to 300 Ohm cm and a minimum lifetime of the minority carriers of 200 to 300 μsec with a homogeneous crystal lattice and without internal stresses and undesirable disturbances. Several methods of etching of silicon plates in etching agents of various compositions were tested. The speed and the depth of etching increases with the concentration of the etching agent and with temperature. The decrease in the thickness as a function of the etching time in various etching agents is plotted in Fig.4. For 150 A rectifiers, a junction area of 200 mm^2 was chosen in order to obtain longer service life, better heat removal and to avoid excessive over-loading when the

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junctions are fully loaded. ČKD manufactures rectifier systems with N-type silicon with junctions produced by the fusion method in vacuum. Type N silicon is the most easily available in Czechoslovakia and so far has proved satisfactory. Manufacture of P-N junctions by the diffusion method is also being studied, since it is considered to be more suitable for P-N-P-N junctions. The best method of protecting P-N silicon junctions from the effects of the atmosphere is to encapsule them in vacuum-tight containers. In tests so far good results have been obtained by protecting the junctions with a silicon vaseline prepared in the Research Institute for Organic Synthesis without any additions; the vaseline must be absolutely pure without moisture and degassed in vacuum. Silicon vaseline with additions of halogenized alkylsilanes has not proved satisfactory. The encapsuling of the rectifier systems is also briefly described. There are 5 figures, 1 table and 15 references: 3 Czech, 1 Soviet, 2 German and 9 English.

ASSOCIATION: ČKD Praha, n.p., závod Stalingrad
(ČKD Prague, Stalingrad Plant)

SUBMITTED: July 20, 1960

Card 6/6

VASILEV, V.

VASILEV, V. Vertical water dynamometer for measuring the capacity of power machines. p. 24.

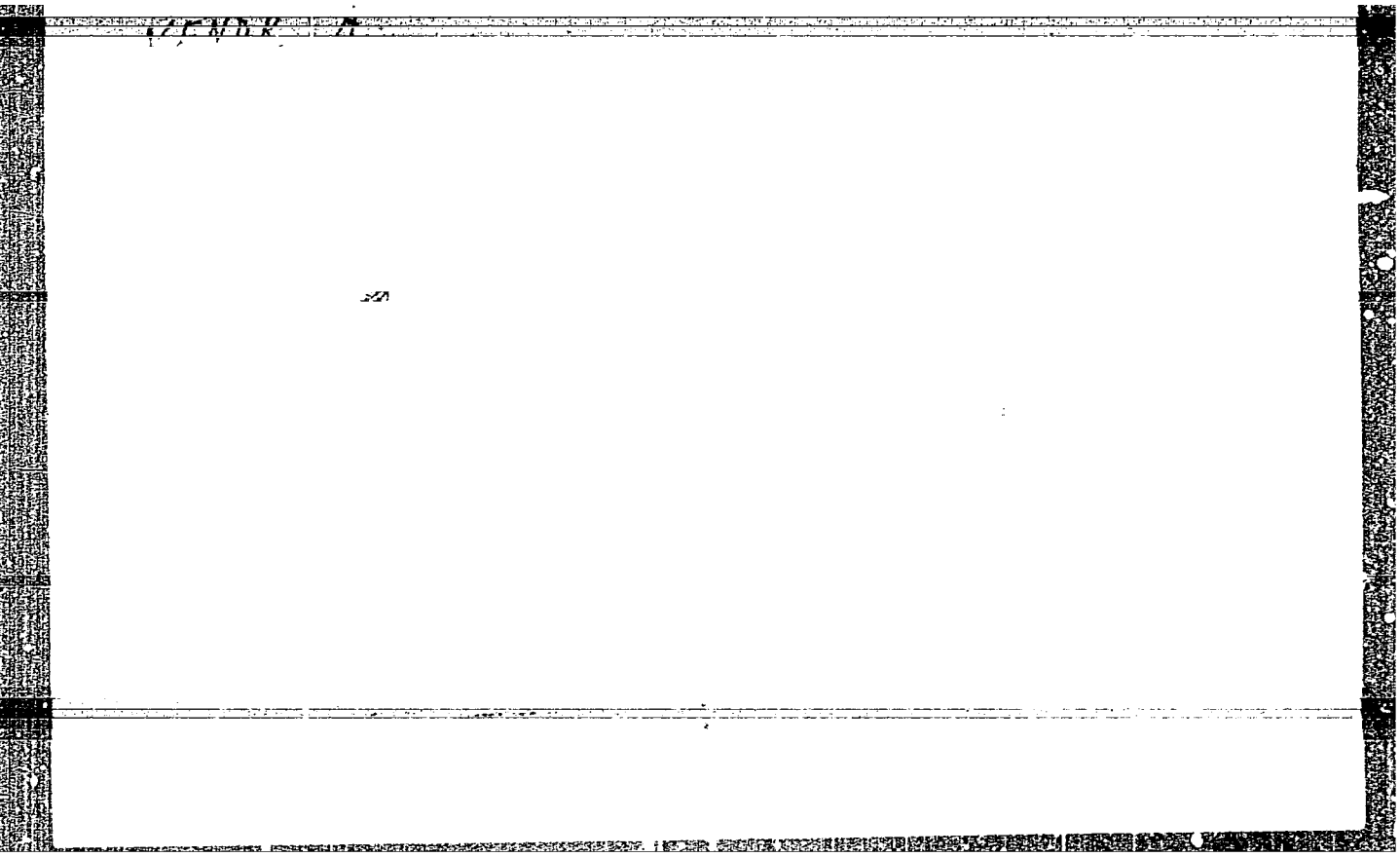
Vol. 5, No. 5, Sept./Oct. 1956
TEKHNIKA.
TECHNOLOGY
Sofiia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

GROSPICOVA, Alena, Inz. CSc.; VENDLOVA, Jitka, Inz.

Occurrence of yeasts and molds on some fruit to be processed for canning. Prum potravin 16 no.2:103-106 F '65.

1. Higher School of Chemical Technology, Prague (for Grospicova).
2. Jihomoravska Fruta National Enterprise, Ceske Budejovice (for Vendlova). Submitted October 23, 1964.



VENDR, A., NEJEDLO, V.

Fine turning of small holes by sintered carbides. p. 147.

STROJIRENSKA VYROBA, Praha, Czechoslovakia, Vol. 7, no. 3, 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959

uncla.

VENDR, A.

Echo of Kolesov's method in the Western press. p. 92.
STROJIRENSKA VYROBA, Prague, Vol. 4, no. 2, Feb. 1956.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

BENUA, Zh. [Benoit, J.]; LERUA, P.; VENDRELI, K.; VENDRELI, R.; KOBRINA, N.B. [translator]

Phenotypes of the bill of the first and second generation Pekin ducks given injections of desocyribonucleinic acid from Khaki-Campbell ducks. Agrobiologii no.1:131-133 Ja-F '59. (MIRA 12:4)

1. Laboratoriya gistofiziologii Kollezh-de-Frans i Laboratoriya fotobiologii Natsional'nogo nauchno-issledovatel'skogo tsentra, Parizh; Nauchno-issledovatel'skiy institut markomolekul Natsional'nogo nauchno-issledovatel'skogo tsentra, Strasburg.
(Duck breeding) (Nucleic acids)

BENUA, Zh. [Benoit, J.]; LERUA, P.; VENDRELI, K.; VENDRELI, R.; KOBRINA, N.B. [translator]

Phenotypes of the bill of the first and second generation Pekin ducks given injections of desocyribonucleinic acid from Khaki-Campbell ducks. Agrobiologii no.1:131-133 Ja-F '59. (MIRA 12:4)

1. Laboratoriya gistofiziologii Kollezh-de-Frans i Laboratoriya fotobiologii Natsional'nogo nauchno-issledovatel'skogo tsentra, Parizh; Nauchno-issledovatel'skiy institut markomolekul Natsional'nogo nauchno-issledovatel'skogo tsentra, Strasburg. (Duck breeding) (Nucleic acids)

VENTRIKH, A.A.

High-voltage safety-device testing equipment. Vest.sviazi 15 no.2:12-13 F'55. (MLRA 8:3)

1. Inzhener MORS.
(Electric engineering--Safety measures)

VENDRIKH, A.A

USSR/ Electricity - Safety measures

Card 1/1 Pub. 133 - 7/18

Authors : Vendrikh, A. A., Engineer

Title : High-voltage installation for testing protective means

Periodical : Vest. svyazi 2, 12 - 13, Feb 1955

Abstract : Description is given of a high-voltage arrangement for testing various means of protecting people against coming in contact with electric currents. The device consists of a complex arrangement of instruments which makes it possible to test dielectric strength of the following protective media: dielectric stands and rubber overshoes, dielectric gloves for workers on low and high-voltage installations, insulation bars for 10 kv installations, neon lamp voltage indicators, etc. Drawings; illustrations.

Institution: .....

Submitted: .....

VE'DRIKH, G. A.

PHASE I BOOK EXPLOITATION 742

Ve'drikh, German Aleksandrovich and Ryabtsovskiy, Mikhail Ivanovich

Stroyashchiysya Irkutsk (Irkutsk Under Construction) [Irkutsk] Irkutskoye knizhnoye Izd-vo, 1956. 134 p. 20,000 copies printed.

Ed.: Stepanchenko, A.I.; Tech. Ed.: Trushkina, T.M.

PURPOSE: This book is intended for the general reader.

COVERAGE: This book is a popular description of old and recent industrial developments in the City of Irkutsk. The first chapter of the book is a historical sketch, describing the major developments from 1661 onwards. The two other chapters report on existing industries and other facilities and discuss

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plans for the future. The Irkutsk Heavy Machinery Works imeni Kuybyshev makes 210-liter drags, coil winders, rails, steel balls, classifiers, and various equipment for metallurgy, such as heating equipment for blast furnaces, pipe-drawing mills, wire-drawing mills, among them 120 ton cold-drawing pipe mills. It is one of the largest East-Siberian enterprises. The machine-tool plant, known as Irkutskiy mekhanicheskiy zavod, makes screw-cutting lathes. The building materials production is being expanded, in connection with the great construction schemes on the Angara. Today, the annual brick output of the city's four brickyards is 100 million bricks. In 1955, 47.8 kilometers of streets were asphalted. The city power station (TETs № 2) supplies not only Irkutsk, but also its vicinity. The book describes also the educational facilities of Irkutsk. Their list is in the appendix. Otherwise no concrete data are given. There are 25 illustrations, among them: Vostsibugol' Administration, Foreign Language Institute, the construction site

the Irkutsk GES (as of June 1956), the Irkutsk GES Administration, the final project of the Dom Sovetov(now under construction), the project of Ploshchad' (Square) Dekabristov, the project of "Avangard" stadium, and the project of the Central Market. There are 38 Soviet references.

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Irkutsk Under Construction 742

Bus Lines 133

Streetcar Lines 135

AVAILABLE: Library of Congress

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VENDRIKH, German Aleksandrovich; RYABTSOVSKIY, Mikhail Ivanovich; STEPANCHENKO, A.I., red.; TRUSHKINA, T.M., tekhn.red.

[Irkutsk under construction] Stroiashchiisia Irkutsk. [Irkutsk] Irkutskoe knizhnoe izd-vo, 1956. 134 p. (MIRA 11:1)
(Irkutsk--Description)

KRESTOVNIKOV, A.N., doktor tekhn. nauk; VENDRIKH, M.S., kand. tekhn. nauk; KUZ'MICHEVA, V.I., inzh.; MATUSEVICH, I.S., inzh.; SHKLENNIK, Ya.I., kand. tekhn. nauk; TELIS, M.Ya., inzh.

Silica-free molds for the casting of heat resistant alloys and high-melting metals. Lit. proizv. no.9:1-3 S '65. (MIRA 18:10)

85804

15.2220 1411, 1439, 1043, 1273

S/148/60/000/003/001/018
A161/A029

AUTHORS: Krestovnikov, A.N.; Vendrikh, M.S.

TITLE: Thermodynamics of Chrome Diboride

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 3, pp. 13 - 16

TEXT: The effective heat absorbing capacity of Cr and B in CrB_2 was calculated separately using Lindemann's formula for finding the natural vibration frequencies of Cr and B atoms; Debye function tables were used for calculating the atomic heat absorbing capacity of Cr and B and the isochoric heat absorbing capacities found for CrB_2 in accordance with Neumann's and Kopp's law, and the isochoric capacities were converted into isobaric ones using the Nernst equation. The calculated heat absorbing capacities were compared with values determined by the authors in experiments with a water calorimeter. The calorimeter has been described previously (Ref. 1). The values found per Debye and as measured coincided in the studied temperature interval (300 - 800°K) but differed considerably at higher temperature, which can be explained by an additional heat effect and must be yet experimentally proven. It is supposed that the real heat absorbing

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Thermodynamics of Chrome Diboride

S/148/60/000/003/001/018
A161/A029

capacity curve for CrB_2 corresponds to a second order parabola with slight curvature. The values for deep and low temperatures (23 - 300°K) were calculated per Debye and extrapolated further to absolute zero by the C_p'T - f (T) curve, and the standard entropy of CrB_2 found to be $S^o_{298} = 9.32$ cal/mol. degr., and the entropies of chrome, boron, chrome diboride, and of CrB_2 were calculated. These data were used for finding the formation entropy of CrB_2. The standard formation heat of CrB_2 (formation enthalpy, ΔH) having been found widely different by different authors (varying from 19.00 kcal/mole per G.V. Samsonov (Ref. 3) to 47.00 per O. Kubashevskiy and E. Evans (Ref. 5) the value 30.00 kcal/mol has been accepted for calculations, and the equation of the dependence of ΔH^o_T on temperature was found: $\Delta H^o_T = 29845 - 0.622T + 2.005 \cdot 10^{-3}T^2 - 0.44 \cdot 10^5 T^{-1}$. Taking the CrB_2 formation heat and entropy, its free energy (isobaric potential) was calculated (Table 5):

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Thermodynamics of Chrome Diboride

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Thermo-dynamic functions	Temperature in °K					
	298	500	1,000	1,500	2,000	2173
Δ H	-30,000	-29,743	-28,506	-26,290	-23,091	-21,747
Δ Z	-30,071	-30,086	-31,122	-32,726	-35,315	-36,436

There are 5 tables and 5 references: 4 Soviet, 1 English.

ASSOCIATION: Moskovskiy institut tsvetnykh metallov i zolota (Moscow Institute of Nonferrous Metal and Gold.

SUBMITTED: January 13, 1959

Card 3/3

S/081/62/000/020/007/040
B166/B186

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S.

TITLE: Thermodynamics of titanium and chromium diboride production by the boron carbide method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1962, 40, abstract 20B261 (Sb. nauchn. tr. In-t tsvetn. met. im. M.I. Kalinina, v. 33, 1960, 3-7)

TEXT: The authors used their own experimental data on the C_p of TiB_2 and CrB_2, and published data on the thermodynamic properties of the components of reactions $2TiO + B_4C + C = 2TiB_2 + 2CO$ and $Cr_2O_3 + B_4C + 2C = 2CrB_2 + 3CO$, to calculate ΔZ, K_p and $p(CO)$ in reactions for synthesizing TiB_2 and CrB_2 by the boron carbide method in the 298-2000°K range. [Abstracter's note: Complete translation.]

Card 1/1

VENTRIKH, M. S., Cand Tech Sci -- (diss) "Effect of scattering of data pertinent to thermal capacities upon the constant of equilibrium and determination of thermal capacities of the borides of certain metals." Mos, 1958. 22 pp (Min of Higher Education USSR, Mos Inst of Non-Ferrous Metals and Gold im M. I. Kalinin), 110 copies (KL, 18-58, 98)

GERASIMOV, Yakov Ivanovich; KRESTOVNIKOV, Aleksandr Nikolayevich; SHAKHOV, Aleksey Sergeyevich. Prinimal uchastiye VENDRIKH, M.S., kand.tekhn.nauk. ASTAKHOV, K.V., prof., doktor khim. nauk, retsenzent; GUDIMA, N.V., dotsent, retsenzent; KAMAYEVA, O.M., red.; MIKHAYLOVA, V.V., tekhn.red.

[Chemical thermodynamics in nonferrous metallurgy] Khimicheskaia termodinamika v tsvetnoi metallurgii. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Vol.1. [Theoretical introduction. Thermodynamic properties of the more important gases. Thermodynamics of zinc and its more important compounds; a handbook] Teoreticheskoe vvedenie. Termodinamicheskie svoistva vazhneishikh gazov. Termodinamika tsinka i ego vazhneishikh soedinenii; spravochnoe rukovodstvo. 1960. 230 p. (MIRA 13:3)

(Thermodynamics) (Zinc)

KRESTOVNIKOV, A.N.; VENDRIKH, M.S.

Thermodynamics of chromium diboride. Izv.vys.ucheb.zav.; chern.met. no.3:13-16 '60. (MIRA 13:4)

1. Moskovskiy institut tsvetnykh metallov i zolota.
(Chromium borides--Thermal properties)

SOV/137-58-11-21954

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 11, p 17 (USSR)

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S.

TITLE: The Heat Capacity of Copper, Zinc, and Lead and the Influence of Heat-capacity Data Scatter on the Equilibrium Constant of the Elementary Oxide and Sulfide Reduction Reaction (Teployemkosti medi, tsinka i svintsa i vliyaniye razbrosa dannykh po teployemkostyam na konstantu ravnovesiya elementarnoy reaktsii vosstanovleniya okisla i sul'fida)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota, Nauchno-tekhn. o-vo tsvetn. metallurgii, 1957, Nr 30, pp 235-253

ABSTRACT: A study is made of the influence of heat-capacity data scatter versus temperature for the reduction reactions of certain oxides and sulfides of heavy nonferrous metals. Two methods of analysis are employed. The first method is based on direct experimental determination of reaction equilibrium, upon which the equilibrium constant K_p is then calculated for the given temperature. The expanded equation for the reaction isochores and isobars is employed to find the free energy, ΔZ. This method permits only implicit determination of

Card 1/2

The Heat Capacity of Copper, Zinc, and Lead (cont.)

the influence of scatter of c_p data upon K_p, i.e., in the form of the influence of scatter upon the integration constant. Therefore, analysis by the first method is performed only for the reduction reactions of Cu_2O, ZnO and ZnS by CO and H_2. The second method of analysis involves the utilization of tables of standard values and the Temkin-Shvartsman method of calculation. This method is used to study the influence of c_p-data scatter versus temperature upon the K_p of the reactions of Cu_2O, Cu_2S, ZnO, ZnS, PbO, and PbS with CO and H_2. The influence of c_p-data scatter upon K_p is determined in explicit form and it is shown that these values are of identical orders of magnitude.

G. F.

Card 2/2

L 23087-66 EWT(m)/T/EWP(t)/EWP(e) IJP(c) JD WH/MJW(CL)
ACC NR: AP5028998 SOURCE CODE: UR/0128/65/000/009/0001/0003

AUTHOR: Krestovnikov, A. N. (Doctor of technical sciences); Vendrikh, M. S. (Candidate of technical sciences); Shklennik, Ya. I. (Candidate of technical sciences); Kuz'micheva, V. I. (Engineer); Matusevich, I. S. (Engineer); Telis, M. Ya. (Engineer)

ORG: none

TITLE: Silica-free molds for casting high-temperature alloys and refractory metals

SOURCE: Liteynoye proizvodstvo, no. 9, 1965, 1-3

TOPIC TAGS: metal casting, silica, refractory metal, nitrate, high temperature alloy

ABSTRACT: Although previous studies have demonstrated the unsuitability of SiO_2 as a molding material for casting refractory metals and alloys, most binders used in investment-pattern casting contain SiO_2 and a radical solution of this problem would be the use of silica-free binders with chemical properties analogous or close to those of the refractory materials (oxides). Ethylsilicate-type silicones meet this need but they are too scarce and expensive. Two of the authors (Ya. I. Shkleynik and I. S. Matusevich. Author's Certificate [Patent] no. 162299 of 25 Apr 1963), have previously established that saturated aqueous solutions of nitrate salts can, following their thermal or chemical decomposition, be used as binders for the preparation of silica-free molds. In this connection, the authors describe laboratory

Card 1/3 UDC: 621.74.045

experiments with the construction of molds based on the use of aluminum nitrate as the silica-free binder, with the setting of the mix being a result of the exchange reaction between the aqueous solution of nitrate salt and oxide:

$$2Al(NO_3)_3 + 3H_2O + 3MgO = 2Al(OH)_3 + 3Mg(NO_3)_2.$$

Sieve-screened metallurgical magnesite and chamotte were used as the fillers. On subsequent firing at 950°C the resulting aluminum hydroxide and magnesium nitrate decompose to form high-disperse oxides assuring the strength of the mix in heated state.

$$2Al(OH)_3 = Al_2O_3 + 3H_2O\uparrow;$$
$$2Mg(NO_3)_2 = 2MgO + 4NO_2\uparrow + O_2\uparrow.$$

The molds were shaped by hand on wood models, dried for 2-3 hr at 300-400°C, heated to 950°C and filled with G13L manganese steel at 1650°C or with L114 steel at 1750°C. Findings: No signs of scorching could be observed on the molds but some parts of their surface displayed bead-like projections which were traced to bubbles of air escaping from their surface; this is a minor technical problem that can be ironed out by a more efficient preparation of the mix. The results confirmed that solutions of nitrate salts and primarily of aluminum nitrate may be used as binders for molding

L 23083-66
ACC NR AP5028998

sands. The two major shortcomings of this method -- the release of toxic nitrogen oxides during the firing of the molds and the considerable (2%) shrinkage of the mix -- are technical problems that can be solved. Experiments have shown that the binder Al_2O_3 can be used in the preparation of silica-free molds of sillimanite, zircon, electrolytically produced corundum, and other materials for the vacuum casting of magnets and high-temperature alloys as well as for the casting of Ti and Cr alloys. Orig. art. has: 1 table, 3 figures.

SUB CODE: 11, 12, 13/ SUBM DATE: none/ ORIG REF: 011/ OTH REF: 001

Card 3/3 PB

KRESTOVNIKOV, A.N.; VENDRIKH, M.S.

Thermodynamics of titanium diboride. Izv. vys. ucheb. zav.; tsvet. met. 2 no.2:54-57 '59. (MIRA 12:7)

1.Moskovskiy institut tsvetnykh metallov i zolota, Kafedra fizicheskoy khimii.

(Titanium borides--Thermal properties)

SOV/137-58-9-18465D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 40 (USSR)

AUTHOR: Vendrikh, M. S.

TITLE: Effect of the Scatter of Specific-heat Data on the Equilibrium Constant and the Determination of the Specific Heat of the Borides of Certain Metals (Vliyaniye razbrosa dannykh po teployemkostyam na konstantu ravnovesiya i opredeleniye teployemkostey boridov nekotorykh metallov)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Mosk. in-t tsvetn. met. i zolota (Moscow Institute for Nonferrous Metals and Gold), Moscow, 1958

ASSOCIATION: Mosk. in-t tsvetn. met. i zolota (Moscow Institute for Nonferrous Metals and Gold), Moscow

1. Metals--Analysis 2. Borides--Specific heat

Card 1/1

SOV/137-58-7-14199

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 34 (USSR)

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S., Feygina, Ye. I.

TITLE: Specific Heat and Heat Content of Compounds of Cadmium, Mercury, Arsenic, Antimony, and Bismuth (Teployemkost' i teplosoderzhaniye soyedineniya kadmiya, rtuti, mysh'yaka, sur'my i vismuta)

PERICODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota i VNITO tsvetn. metallurgii, 1957, Nr 26, pp 233-258

ABSTRACT: A critical evaluation of bibliographical data on the specific heat and heat content of CdO, CdS, $CdCl_2$, HgO, HgS, Hg_2SO_4, HgCl, $HgCl_2$, As_2S_3, As_2O_3, As_2O_5, Sb_2O_3, Sb_2O_4, Sb_2O_5, Sb_2S_3, $SbCl_3$, Bi_2S_3, and Bi_2O_3 has been conducted. The most reliable values and equations for utilization in thermodynamic and metallurgical calculations were selected. Bibliography: 25 references.

1. Intermetallic compounds--Specific heat 2. Intermetallic compounds--Thermodynamic properties

Yu. Z.

Card 1/1

SOV/137-58-10-21470

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 144 (USSR)

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S.

TITLE: Specific Heat of Chromium Boride (Teployemkost' borida khroma)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota, Nauchno-tekhn. o-vo tsvetn. metallurgii, 1957, Nr 30, pp 135-137

ABSTRACT: The mean specific heat of CrB_2 (70% Cr, 29.9% B, 0.05% C 0.40% Fe) was determined on a water calorimeter set for the temperature range from room temperature to 300, 400 500, 600, 700, and 800°C. On the basis of the data obtained the following equation for the relationship of specific heat to temperature was developed by the method of least squares: $c = 0.1342 + 1.03 \cdot 10^{-4} T$. An equation for the true specific heat capacity, $c = 0.1061 + 2.06 \cdot 10^{-4} T$, was also obtained.

L. B.

1. Chromium borides--Specific heat

Card 1/1

SOV/137-58-10-20464

Translation from: Referativnyy zhurnal, Metallurgiya 1958, Nr 10, p 17 (USSR)

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S.

TITLE: The Specific Heat of Zirconium Boride (Teployemkost' borida tsirkoniya)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Razd. tsvetn. metallurgiya, 1958, Nr 1, pp 73-75

ABSTRACT: The average specific heats of Zr boride are (in cal/g): for 20-400°C, 0.1332; for 20-500°, 0.1369; for 20-600°, 0.1414; for 20-700°, 0.1410; and for 20-800°, 0.1442. The data obtained are used to compile equations for the average and true specific and molecular heat capacities. The deviation of the values found from those calculated by the Maydel' equation (by the rule of additivity) is <10%.

B. L.

1. Zirconium borides--Specific heat

Card 1/1

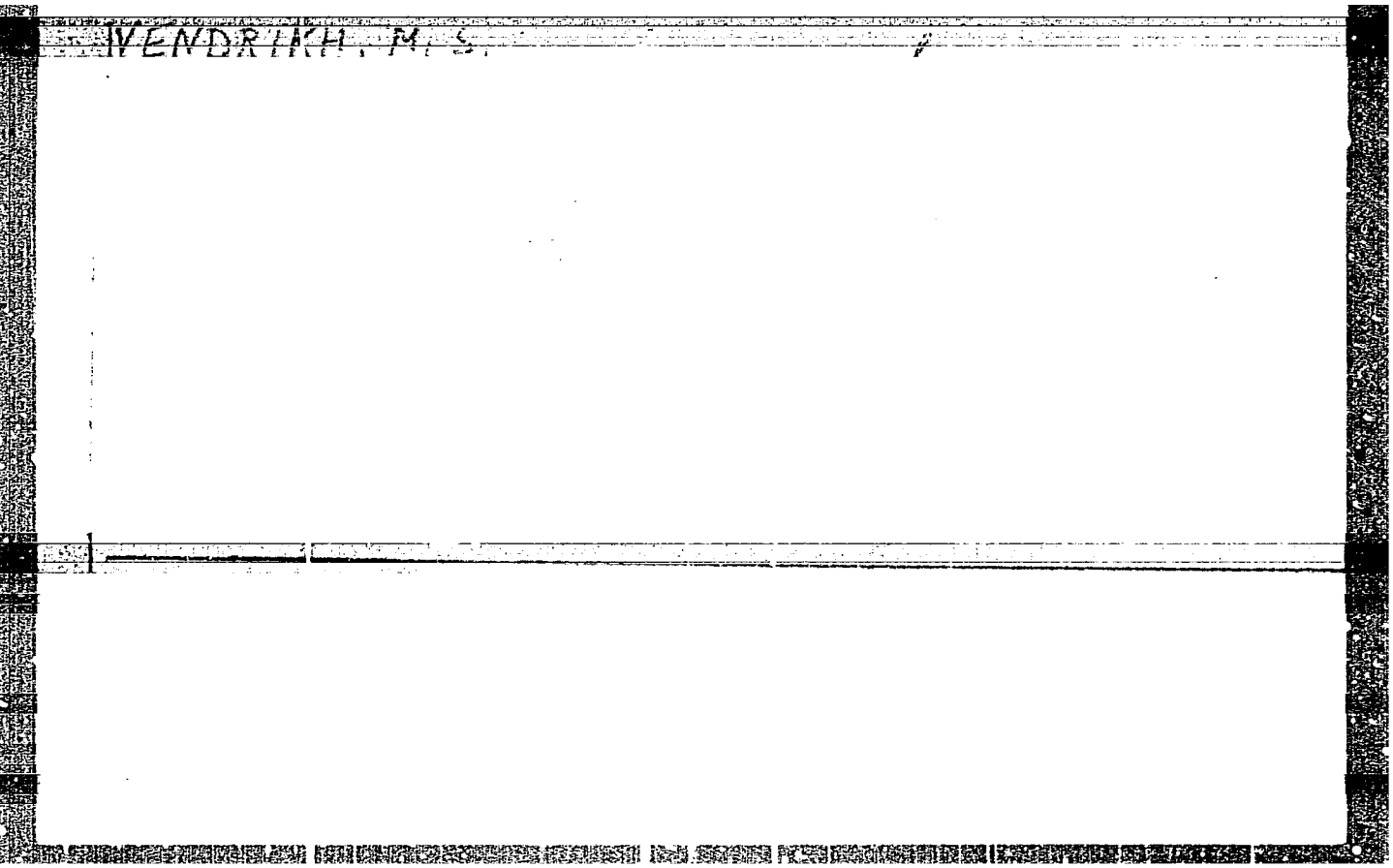
KRESTOVNIKOV, A.N.; VENDRIKH, M.S.

Thermodynamics of making titanium and chromium diborides by the boron carbide method. Sbor. nauch. trud. GIPTSVETMET no.33:3-7 '60. (MIRA 15:3)
(Titanium boride) (Chromium boride) (Boron carbide)

KRESTOVNIKOV, A.N.; VENDRIKH, M.S.

Heat capacity of zirconium boride. Izv. vys. ucheb. zav.; tsvet. met. no.1:73-75 '58. (MIRA 11:6)

1. Moskovskiy institut tsvetnykh metallov i zolota. Kafedra fizicheskoy khimii.
(Zirconium borides) (Calorimetry)



S/137/62/000/007/002/072
A052/A101

AUTHORS: Krestovnikov, A. N., Vendrikh, M. S.

TITLE: Thermodynamics of producing titanium and chromium diborides by boron-carbide method

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 7, abstract 7A34 ("Sb. nauchn. tr. In-t tsvetn. met. im. M. I. Kalinina", no. 33, 1960, 3 - 7)

TEXT: The values of free energy and equilibrium constants for reactions of producing TiB_2 and CrB_2 by boron-carbide method were computed for different temperatures. As the temperature increases, the equilibrium pressure of CO increases too; this fact conditions the necessity of carrying out the reactions in a vacuum.

Ye. Mozzhukhin

[Abstracter's note: Complete translation]

Card 1/1

VENDROV, A.A.

Listerellosis in swine. Veterinariia 31 no.8:32-33 Ag '54.
(MLRA 7:9)
1.Glavnyy veterinarnyy vrach Kokchetavskogo tresta sovkhozov.
(SWINE--DISEASES)

VENDROV, A. A.

USSR/Medicine - Veterinary FD-1288

Card 1/1 : Pub 137-8/20

Author : Vendrov, A. A.

Title : Listerellosis in swine

Periodical : Veterinariya, 8, 32-33, Aug 1954

Abstract : Excrements of animals, apparently, are the only source of listerellosis infection; the disease is not transmitted by direct contact. This disease is prevalent more often during summer months than during cold weather and affects generally swine under 12 months of age. Penicillin, sulfanilamides, and protein therapy are recommended for treatment of swine that have listerellosis. Treatment of listerellosis in swine by means of intramuscular injection of penicillin (1-2 thousand units per kg of animal's weight) every 2-3 4-5 times, produced positive effects in a few cases only.

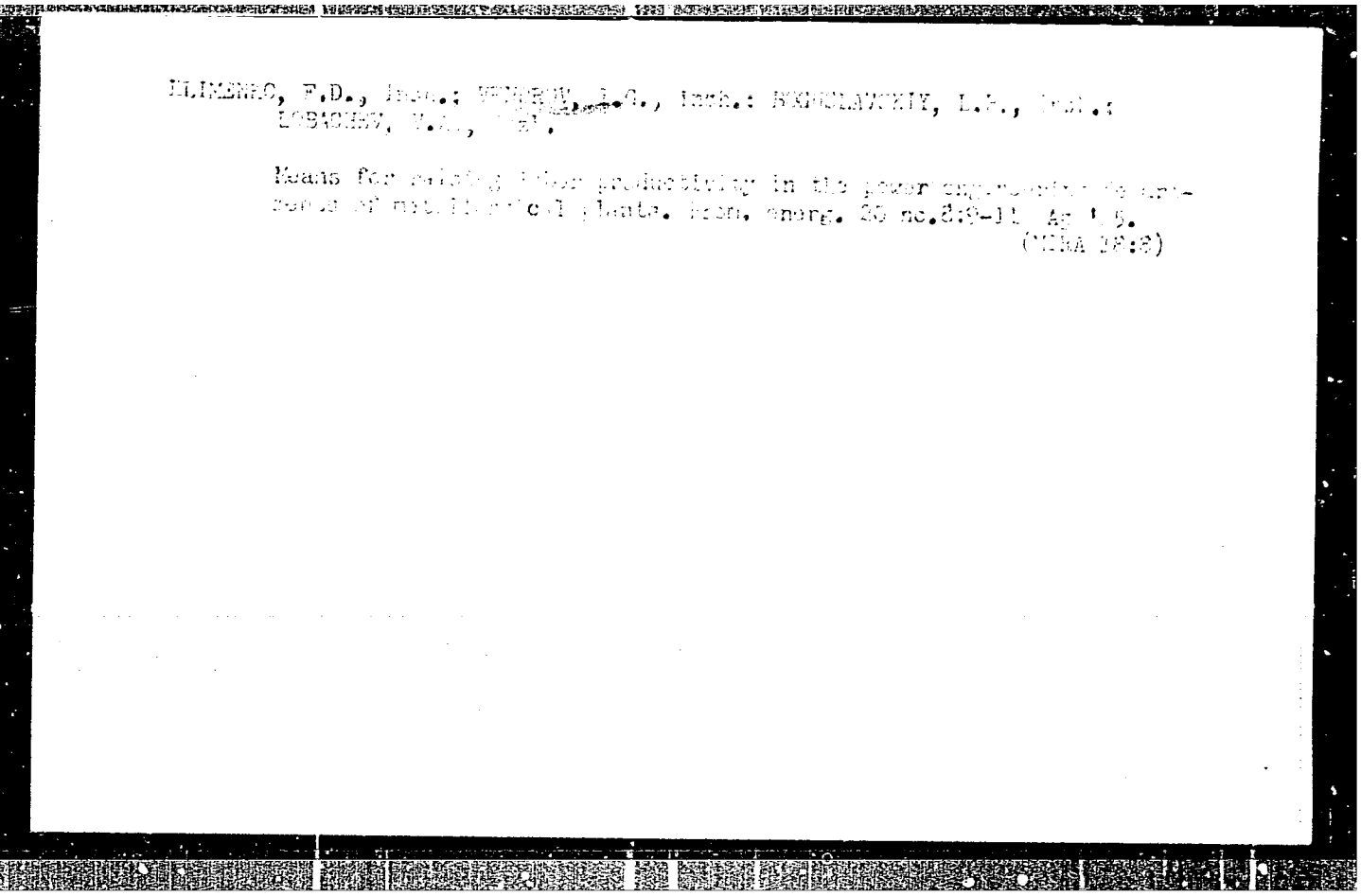
Institution : (Chief Veterinary Physician), Kokchetavskiy Sovkhoz Trust

Submitted :

APTEKAR', S.; VENDROV, I.; SHMULICH, F.

Determining the expenditure of labor for repairing metallurgical equipment. Sots. trud 7 no.9:73-78 S '62. (MIRA 15:9)

1. Donetskiy sovet narodnogo khozyaystva.
(Donetsk Province--Steel industry--Equipment and supplies)



KLIMENKO, F.D., inzh.; VENDROV, I.G., inzh.; BOGUSLAVSKIY, L.B., inzh.; LOBACHEV, V.A., inzh.

Means for increasing labor productivity in the power engineering departments of metallurgical plants. Prom. energ. 20 no.9:8-11 S '65. (MIRA 18:9)

KLIMENKO, F.D.; VENDROV, I.G.; LOBACHEV, V.A.; KURGUZOV, G.I.

Increasing the replaceability ratio and the intensity of using the equipment. Metallurg 10 no.12:41-42 D '65.
(MIRA 18:12)

VENDROV, M.I.; MIRONOVA, O.I.

Rapid method of determining the cetane numbers of diesel fuel from the aniline point. Khim.i tekh.topl.i masel 5 no.10:64 O '60.
(MIRA 13:10)

(Diesel fuels)

OVSYANNIKOV, N.; ZORIN, N.; MATLIN, G.; KUZKOV, L.; VEDROV, S.

Improve the full use and preservation of U.S.S.R. water resources.
Rech. transp. 19 no.11:32-35 N '60. (MIRA 13:11)
(Water supply engineering)

VENDROV, S. L.

Zadachi izyskanii i issledovanii na vnutrennikh vodnykh putiakh SSSR. /The problems of survey and research on the inland waterways of the U.S.S.R./. (Rechnoi transport, 1945, no. 10-11, p. 15-16). DLC: TC601.R4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

VENDROV, S. L.

VENDROV, S. L. - "Methods of Investigation of Changes of a Maximum River Runoff Taking Into Account the Transformation of Natural Geographical Conditions in Large River Basins." Sub 11 Apr 52, Moscow Order of Lenin State U imeni V. M. Lomonosov. (Dissertation for the Degree of Candidate in Geological and Mineralogical Sciences).

SO: Vechernaya Moskva January-December 1952

1. VENDROV,.S.L.

2. USSR (600)

4. Hydraulic Engineering

7. Selecting a calculated high-water level for river bank construction projects. Rech. transp. No. 6 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VENDROV, S. L.

Sounding and Soundings

Depth sounding by means of an echo bob of a type devised by the State Institute for River Transport Planning and Research. Rech.transp. 12 no.1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

VEN[illegible], S. N.

Izmeneniya maksimal'nogo stoka ravninnykh rek v svyazi s preobrazovaniyem prirody (Changes in maximum flow of level country rivers in the transformation of natural conditions) Moskva, Rechizdat, 1953.
69 p. diagrs., tables
"Literatura": p. 66-(70)

SO: N/5
623.36
.v4

DOMANEVSKIY, N.A.; VENDROV, S.L., redaktor; VINOGRADOVA, N.M., redaktor; KRASNAYA, A.K., tekhnicheskiy redaktor.

[River and lake surveys and studies] Rechnye i ozernye izyskaniia i issledovaniia. Moskva, Vodtransizdat, 1953. 362 p. (MLRA 7:7)
(Hydroelectric power) (Hydrography)

VENDROV, S. L.

Defended his Candidates dissertation in the Geography Faculty of Moscow State University on 2 June 1952.

Dissertation: "Methods of Investigation of the Change of Maximum River Flow Taking Into Account the Transformations of Natural Geographical Conditions in the Basins of Large Rivers."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in UM-20782, 12 April 54, For off. use only.

VENDROV, S.L. PA246T78

USSR/Geophysics - Runoff Mar/Apr 53

"Changes in Spring and Midsummer Runoff of Large Lowland Rivers in European USSR in Connection With the Transformation of Natural Conditions in Their Watershed Area," S.L. Vendrov, Moscow State Planning-Research Inst of River Transport

"Iz Ak Nauk SSSR, Ser Geograf" No 2, pp 7-18

States that the quantity of runoff can be computed in most cases from natural runoff, precipitation, character of watershed surface, pedological-vegation cover, relief, and microclimate.

246T78

VEREDROV, S.; PEKISHEV, K.

Rapid methods of conducting a large-scale survey of a river bed. Mor.i rech. flot 13 no.1:28 My '53. (MLRA 6:10)

(Surveying) (Rivers)

VENDROV, S., kandidat geograficheskikh nauk.

Relief changes of the shore line of the TSimlyansk Reservoir. Mor.i rech.flot 13 no.5:25-28 S '53. (MLRA 6:10)

(TSimlyansk Reservoir--Shore lines)

VENDROV, S.L.

Dynamics of the Tsimlyansk Reservoir shore line. Izv. AN SSSR. Ser. geog. no.5:16-29 S-O '55. (MLRA 9:1)

1.Gosudarstvennyy institut proyektirovaniya na rechnom transporte.
(Tsimlyansk reservoir--Shore lines)

14-1-389

Translation from: Referativnyy Zhurnal, Geografiya, 1957, Nr 1, p. 37 (USSR)

AUTHORS: Vendrov, S.L., Kostyanitsyn, M. N., Pekishev, K. M.

TITLE: Observations on the Deformation of the Shores of the Tsimlyanskoye Reservoir made in 1952 - 1953 by the Moscow State Institute for the Design and Planning of Water Transport (Nablyudeniya Mosgiprovodtransa za deformatsiyey beregov Tsimlyanskogo vodokhranilishcha v 1952 - 1953 gg)

PERIODICAL: Tr. Okeanogr. komis. AN SSSR, 1956, Nr 1, pp. 160-162

ABSTRACT: A priliminary study made in August and September of 1952 (before the reservoir had been filled) indicated that during the 4 months of operation of the reservoir an important disintegration of the shores had taken place

Card 1/3

Observations on the Deformation of the Shores of the Tsimlyanskoye Reservoir made in 1952 - 1953 by the Moscow State Institute for the Design and Planning of Water Transport

and bars had appeared in ravine-inlets. Comprehensive studies (including stationary observations at 7 points on the shore) made in 1953, after the reservoir had been filled to its normal working level (5.5 m), established the relationship between wind velocity and wave height (0.6 to 1.8 m) in various sections of the reservoir. This relationship takes into account different directions of the wind. Given an identical wind velocity, waves of the Tsimlyanskoye Reservoir are considerably shorter than those of the ocean. This fact is conducive to a more intense rate of deformation of the reservoir shoreline. The relatively small number of calm days during the spring and fall contribute to the recession of the shoreline and to the formation of silt shelves (by the washing out of some beaches and the alluviation of others). Other contributing factors are the steepness

 of the shores and the original formation of the submerged

Observations on the Deformation of the Shores of the Tsimlyanskoye Reservoir made in 1952 - 1953 by the Moscow State Institute for the Design and Planning of Water Transport

Don River Valley. Wherever the shores were formed by a loess type of conglomerates and conglomerates with a partial admixture of sand, the shoreline receded 60 m in 2 years. A shoreline with a clay formation receded as much as 13 m during a navigational season. The submerged slopes of the newly formed silt shelves leveled off from 13-8° to 3-2° in the course of a single navigational season. The rate at which the shore receded did not diminish noticeably, which could be explained by the fact that the silt shelves were as yet relatively narrow.

ASSOCIATION: Oceanography Commission, Academy of Sciences, USSR (Okeanogr. komis. AN SSSR)

Card 3/3